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10/619,095	07/11/2003	Takashi Okuyama	FS.20107US0A	4711

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EXAMINER

ZHU, BO HUI ALVIN

ART UNIT	PAPER NUMBER
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2616

NOTIFICATION DATE	DELIVERY MODE
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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/619,095	OKUYAMA, TAKASHI	
	Examiner	Art Unit	
	Bo Hui A. Zhu	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2003.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-9, 11-14, 16-18, 21 and 22 is/are rejected.
- 7) ☒ Claim(s) 6, 10, 15, 19, 20 and 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities: in line 11, "date field" should be corrected as "data field". Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3 – 5, 7 – 9, 11 – 14, 16 – 18 and 21 – 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over El-Demerdash et al. (US 2003/0214953) in view of Stoneking et al. (US 6,606,670) and further in view of Sadamori (US 5,311,172).

(1) with regard to claims 1, 11, 16 and 21:

El-Demerdash et al. discloses a system and method, comprising: a multiple node network (Controller Area Network, 200, on Fig. 6) comprising a plurality of terminal nodes (slave nodes, 204, 206, 208, 210 and 212, on Fig. 6), a management node (master node, 202, on Fig. 6) at least initially managing the terminal nodes (paragraph [0055]), and a bus arranged to connect the respective terminal nodes and the management node to one another (CAN bus; paragraph [0057]).

El-Demerdash et al. does not disclose the terminal nodes and the management node communicating with one another using a respective frame that includes at least an

identifier field and a data field use respective frame of the system for communication between the terminals of the system, and at least some of the terminal nodes transferring a frame to the management node in which the data field contains a discriminative code, the management node arbitrating a contention between one or more of terminal nodes by comparing the identifier field of one terminal node in contention with the identifier field of another terminal node in contention, and at least some of the terminal nodes being capable of calculating a time delay based upon at least a portion of the discriminative code in the data field when arbitration fails and re-transferring the frame to the management node after the time delay.

Stoneking et al. teaches using a respective frame that includes at least an identifier field and a data field for communication between the terminals of the system (CAN frame, on Fig. 2A; Arbitration field of the frame is the identifier field; and the Data field is the data field), and arbitrating contention by comparing the identifier field of one terminal node in contention with the identifier field of another terminal node in contention (column 5, lines 30 – 61). It would have been desirable that terminal nodes and the management node communicating with one another using a respective frame that includes at least an identifier field and a data field use respective frame of the system for communication between the terminals of the system, and at least some of the terminal nodes transferring a frame to the management node in which the data field contains a discriminative code, the management node arbitrating a contention between one or more of terminal nodes by comparing the identifier field of one terminal node in contention with the identifier field of another terminal node in contention, because it

would make the system more efficient by enforcing priority on data traffic and eliminating delay on the higher priority traffic. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the features as taught by Stoneking et al. in to the system of El-Demerdash et al.

Sadomori teaches terminal nodes being capable of calculating a time delay based upon at least a portion of the discriminative code in the data field when arbitration fails and re-transferring the frame to the management node after the time delay (column 4, lines 60 – 67; column 3, lines 35 – 39; Fig. 3). It would have been desirable to have the terminal nodes being capable of calculating a time delay based upon at least a portion of the discriminative code in the data field when arbitration fails and re-transferring the frame to the management node after the time delay, because it would make the system more efficient by preventing collision from recurring. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the features as taught by Sadomori into the system of El-Demerdash et al.

(2) with regard to claims 3, 14, 17:

El-Demerdash et al. does not disclose the data field selectively comprises a plurality of bits corresponding to the discriminative code, and said at least some of the terminal nodes calculate the respective time delay using some of the bits.

Sadomori teaches the data field selectively comprises a plurality of bits corresponding to a discriminative code, and said at least some of the terminal nodes calculate the respective time delay using some of the bits (column 4, lines 60 – 67; column 3, lines 35 – 39; Fig. 3; the source station number is the discriminative code). It

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would have been desirable that the data field selectively comprises a plurality of bits corresponding to a discriminative code, and said at least some of the terminal nodes calculate the respective time delay using some of the bits, because it would make the system more efficient by preventing collision from recurring. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the features as taught by Sadori into the system of El-Demerdash et al.

(3) with regard to claims 4, 18:

El-Demerdash et al. does not disclose data field comprises a plurality of bit units, and said at least some of the terminal nodes selects one of the bit units at a time to calculate the time delay.

Sadori teaches the data field comprises a plurality of bit units, and said at least some of the terminal nodes selects one of the bit units at a time to calculate the time delay and the bit unit forms a byte (column 4, lines 60 – 67; column 3, lines 35 – 39; Fig. 3; the source station number is the discriminative code; and inherently it comprises a plurality of bit units because it is transmitted in a frame). It would have been desirable that the data field comprises a plurality of bit units, and said at least some of the terminal nodes selects one of the bit units at a time to calculate the time delay, because it would make the system more efficient by preventing collision from recurring. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the features as taught by Sadori into the system of El-Demerdash et al.

(4) with regard to claim 5:

EI-Demerdash et al. does not disclose the bit unit forms a byte.

However, the Examiner takes Official Notice that codes like terminal addresses which are represented by a plurality of bytes is well known in the art. For example, IP address, which consists of 4 bytes. It would be desirable to use these codes because it would simplify the design the system as they are readily accessible and well known in the art. It would therefore be obvious to one of ordinary skill in the art at the time of the invention to use these codes in the system of EI-Demerdash et al.

(5) with regard to claim 7:

EI-Demerdash et al. does not disclose each one of the terminal nodes transfers the frame to the management node to obtain a network address from the management node. However, the Examiner takes Official Notice that it is well known in the art that in a bus network terminal nodes transfer frames to a management node to obtain a network address. An example would be a Dynamic Host Configuration Protocol (DHCP) management node. It would be desirable to use such feature because it would allow a network node to be reached by other nodes in the network without inputting unnecessary traffic in the network such as by flooding, and thus makes the network more efficient. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include this feature in the system of EI-Demerdash et al.

(6) with regard to claim 8:

EI-Demerdash et al. discloses each one of the terminal nodes belongs to a component of a system (Fig. 6, network 200 is a system, every node, 202 – 212, is a

component of the system 200). El-Demerdash et al. however does not disclose the discriminative code includes a number allotted to the component.

Sadamori teaches the discriminative code includes a number allotted to the component (column 4, line 66, the station number of the communication station is a number allotted to the communication station). It would have been desirable the discriminative code includes a number allotted to the component, because it would make the system more efficient by preventing collision from recurring. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the features as taught by Sadomori into the system of El-Demerdash et al.

(7) with regard to claim 9:

El-Demerdash et al. does not disclose the number is any identifier selected from the group consisting of a product number, a part number, a manufacturing number and a manufacturer number for the component.

However, the Examiner takes Official Notice that the number is any identifier selected from the group consisting of a product number, a part number, a manufacturing number and a manufacturer number for the component is well known in the art. For example, the MAC addresses. It would be desirable to use these numbers because it would simplify the design of the system, as they are readily accessible and well known in the art, and allow network communication between different components of the network. It would therefore be obvious to one of ordinary skill in the art at the time of the invention to use these numbers in the system of El-Demerdash et al.

(8) with regard to claim 12:

El-Demerdash et al. does not disclose the system is a vehicle, the component is a drive unit of the vehicle, and the discriminative the number is any one of a product number, a part number, a manufacturing number and a manufacturer number of the drive unit or a member related to the drive unit.

Stoneking et al. teaches a controller area network system for a vehicle and the component is a drive unit of the vehicle (column 4, lines 15 – 22). It would have been desirable to use an existing network system on a vehicle because it would increase the productivity of the system and thus raises the economic incentive for building the system. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the teaching of Stoneking et al. in the system of El-demerdash.

The Examiner takes Official Notice that the discriminative the number is any one of a product number, a part number, a manufacturing number and a manufacturer number of the drive unit or a member related to the drive unit is well known in the art. For example, the MAC addresses. It would be desirable to use these numbers because it would simplify the design of the system, as they are readily accessible and well known in the art; and allow network communication between different components of the network. It would therefore be obvious to one of ordinary skill in the art at the time of the invention to use these numbers in the system of El-Demerdash et al.

(9) with regard to claims 13 and 22:

El-Demerdash et al. does not disclose the vehicle is a watercraft, and the drive unit is an outboard motor that propels the watercraft, the outboard motor has an engine

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as the member, and the discriminative the number is any one of a product number, a part number, a manufacturing number and a manufacturer number of the outboard motor or the engine.

The Examiner takes Official Notice that a watercraft have a controller area network system is well known in the art; and a drive unit of a watercraft is an outboard motor that propels the watercraft and the outboard motor has an engine is also well known in the art; and it would be desirable to use these well known technologies because it would simplify the design process and increase the productivity of the network. The discriminative the number is any one of a product number, a part number, a manufacturing number and a manufacturer number is also well known in the art. For example, the MAC addresses. It would be desirable to use these numbers such as the MAC addresses because it would simplify the design of the system, as they are readily accessible and well known in the art, and allow network communication between different components of the network. It would therefore be obvious to one of ordinary skill in the art at the time of the invention to use these numbers in the system of El-Demerdash et al.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over El-Demerdash et al. (US 2003/0214953) in view of Stoneking et al. (US 6,606,670) and Sadamori (US 5,311,172) and further in view of Seconi et al. (US 5,619,726).

(1) with regard to claim 2:

El-Demerdash et al. does not disclose at least two of the terminal nodes have the same identifier field as one another, and the arbitration fails when the terminal nodes having the same identifier field simultaneously transfers the respective frames.

Seconi et al. teaches at least two of the terminal nodes have the same identifier field as one another, and the arbitration fails when the terminal nodes having the same identifier field simultaneously transfers the respective frames (column 8, lines 51 – 55. When the priority levels of two bus requests are the same, only one can be granted the access). It would have been desirable that the arbitration will fail when the terminal nodes having the same identifier field simultaneously transfers the respective frames, because it would prevent collision from occurring in the bus thus makes the system more efficient. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include the features as taught by Seconi et al. into the system of El-Demerdash et al.

Allowable Subject Matter

5. Claims 6, 10, 15, 19, 20 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bo Hui A. Zhu whose telephone number is (571)270-1086. The examiner can normally be reached on Mon-Thur 10am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571)272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BZ
August 15, 2007


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